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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/611,364	07/06/2000	Tetsuya Abe	P19357	6388
7055	7590	09/06/2005	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C.			SENI, BEHROOZ M	
1950 ROLAND CLARKE PLACE			ART UNIT	
RESTON, VA 20191			PAPER NUMBER	
			2613	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/611,364

Applicant(s)

ABE ET AL.

Examiner

Behrooz Senfi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-5,9,15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1, 6 - 8, 10 - 14 and 17 - 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 7 - 8, 10, 11 – 12 and 17 - 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muramoto et al (US 6,507,359) in view of Okauchi et al (US 5,864,360).

Regarding claim 1, Muramoto '359 teaches, "stereo camera comprising" (i.e. fig. 2), "a pair of photographing optical system that produces a corresponding pair of photographing areas, the pair of photographing optical systems being located in a common plane to enable a common photographing coverage between each of the pair of photographing areas" (i.e. figs. 4, and 9), and "an object distance measuring device that measures a distance to an object" (i.e. fig. 14, col. 12, lines 32 – 36 and col. 13, lines 1 - 4). Furthermore, Muramoto '359 teaches, (i.e. fig. 5, 335, 336, and fig. 20) group lenses and optical mirror in each camera (left and right, which could be prism) thus being adjusted and controlled in accordance with convergence angle, wherein each camera is provided with an object distance detector, (i.e. col. 12, lines 55 – col. 13, lines 21). Muramoto '359 does not particularly mentions the newly added limitation "a

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pair of variable angle prisms (VAP)". However, such features are well known and used in the prior art of the record as evidenced by Okauchi '360 (i.e. col. 13, lines 14 – 19) wherein the variable apical/apex angle prisms can be used as an alternative for pivoting the cameras. Taking the combined teaching of Muramoto '359 and Okauchi '360, it would have been obvious to one skilled in the art at the time of the invention was made to use variable apical/apex angle prisms as an alternative in the image taking system of Muramoto for pivoting the cameras without arranging a mechanism to pivot the cameras, as taught by Okauchi.

Regarding claim 7, the limitation "stereo camera is applied to an electronic still camera" (i.e. col. 7, lines 53 – 55).

Regarding claim 8, the limitations claimed has been discussed earlier with respect to claim 1.

Regarding claim 10, the limitation "wherein the object distance measuring device comprises an image sensor that performs an active distance measurement" reads on (col. 12, lines 63 – col. 13, lines 4 of Muramoto).

Regarding claim 11, the limitation "distance measured by the object distance measuring device comprises a distance from a point on the common plane, located between the pair of photographing optical systems" please see (fig. 9 and 14).

Regarding claim 12, the claimed "wherein the point on the common plane is centered between the pair of photographing optical systems" please see (fig. 9 and 14).

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Regarding claim 17, the limitation “angle of convergence obtained at the one of the optical systems is identical to an angle of convergence obtained at the other of the optical system” reads on (i.e. fig. 4, col. 8, lines 24 – 27 of Muramoto).

Regarding claim 18, the limitation claimed are discussed and covered with respect to claim 17, above.

3. Claims 6, 10 and 13 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muramoto ‘359 in view of Okauchi ‘360 further in view of Watanabe et al (US 5,819,016).

Regarding claim 6, combination of Muramoto ‘359 and Okauchi ‘360 teaches, “stereo camera comprising, a pair of photographing optical system that produces a corresponding pair of photographing areas, the pair of photographing optical systems being located in a common plane to enable a common photographing coverage between each of the pair of photographing areas and an object distance measuring device that measures a distance to an object, and pair of variable angle prisms (VAP)” as discussed with respect to claim 1 above and “measurement point located in an inner half of field angle” reads on the conversion angle adjustment. Combination of Muramoto ‘359 and Okauchi ‘360 does not explicitly mentioned “wherein each of the pair of photographing optical systems comprises an image device that performs a passive measurement of an object distance”. However such features are well known and used in the prior art of the record as evidenced by Watanabe ‘016 (i.e. col. 13, lines 54 – 58) wherein teaches passive stereo measuring unit using two cameras. Taking the combined

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teaching of Muramoto '359 and Okauchi '360 and Watanabe '016, it would have been obvious to one skilled in the art at the time of the invention was made to equip the stereo cameras of Muramoto '359 and Okauchi '360 with passive stereo measuring unit for the purpose of distance measurement as taught by Watanabe '016.

Regarding claim 10, combination of Muramoto '359 and Okauchi '360 and Watanabe '016 teaches, "object distance measuring device comprises an image sensor that performs an active distance measurement" (i.e. col. 13, lines 59 – col. 14, lines 10).

Regarding claim 13, the limitations claimed are discussed and covered with respect to claim 6 above.

Regarding claim 14, the limitation "wherein the pair of photographing optical systems perform a focusing function based on data obtained from the pair of passive distance devices" see (i.e. col. 13, lines 54 – col. 14, lines 63).

***Allowable Subject Matter***

4. Claims 2 – 5, 9 and 15 – 16 are allowed over the prior art of the records.
5. The following is an examiner's statement of reasons for allowance: the prior art of the record fails to anticipate or rendered obvious the limitation "pair of photographing optical systems, each including an image pickup device that performs a passive distance measurement of an object distance, and an object distance measuring device that performs an active distance measurement to measure a distance to an object, and a controller that controls each of the pair of photographing optical systems to perform the passive distance measurement of

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an object distance until such time as a release button is depressed at least by a half step, controls the object distance measuring device to perform the active distance measurement after the release button is depressed at least by a half step, and controls the convergence angle adjustment mechanism in accordance with object distance data corresponding to the measured distance to the object obtained by the active measurement, shown in fig. 7" as cited in independent claim 9.

Claims 2 – 5 and 15 – 16 are allowed with respect to claim 9.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(571) 272-7339**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mehrdad Dastouri** can be reached on **(571) 272-7418**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**

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**(571) 273-8300**

Hand-delivered responses should be brought to Randolph Building, 401  
Dulany Street, Alexandria, Va. 22314.

Any inquiry of a general nature or relative to the status of the application or  
proceeding should be directed to the Technology Center 2600 Customer Service  
Office whose telephone number is (703) 306-0377.

B. M. S. 

8/26/2005

  
VU LE  
PRIMARY EXAMINER